

CATALOG
FIRST GENERATION

HMI
K / T / X / OpenFrame
Series



Perfect to Make
Smart Technologies
of IoT.



屏通科技股份有限公司
CERMATE TECHNOLOGIES INC

Worldwide Cermate Partners

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France - IP Systemes

Germany / Switzerland - Pericom AG

India - DEVANSHI ELECTRONICS PVT LTD

Italy - KITE automation srl

Malaysia - IKA AUTOMATION SDN BHD

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Thailand - E-Power Service Co., Ltd

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Cermate

A professional HMI solution provider

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Cermate

A professional HMI solution provider

K/T/X-Series

K-Series Economy HMI Panels

T-Series Enhanced HMI Panels

X-Series Advanced HMI Panels



PanelMaster

Designed to be Outstanding

X-SERIES

Advanced HMI Panels

(For General Product Group)

Products Selection Guide

The X-series supports comprehensive LCD sizes ranging from 7" to 15" and are equipped with an ARM11 based CPU, 1G flash memory and 1MB battery backup memory. It's expansive communication interfaces; RS232/422/485, Ethernet, and USB port, with over 300 communication drivers allowing the X-series to connect easily with all types of equipment, such as motion/thermal controllers, inverters or sensors to name a few.

- 7"~15" TFT LCD screen size
- Wide temperature & high functionality
- BACnet, Ethernet IP, Video In



	PX150-XSD	PX121-XSD	PX104-TST	PX070-WST
Size	15" (4:3)	12.1" (4:3)	10.4" (4:3)	7" (16:9)
Resolution	1024 x 768	1024 x 768	800 x 600	800 x 480
Working Memory	256 MB	256 MB	256 MB	256 MB
Built-in Storage Memory	1 GB	1 GB	1 GB	1 GB
Battery Backed RAM	1 MB	1 MB	1 MB	1 MB
COM1	RS232/422/485	RS232/422/485	RS232/422/485	RS232/422/485
COM2	A/B/C*	A/B/C*	A/B/C*	A/B/C*
COM3	RS232 or RS485	RS232 or RS485	RS232 or RS485	RS232 or RS485
COM4	RS422/485**	RS422/485**	RS422/485**	RS422/485**
USB	1 Client ; 1 Host	1 Client ; 1 Host	1 Client ; 1 Host	1 Client ; 1 Host
Audio Out	Optional	Optional	Optional	Optional
Video In	Optional	Optional	Optional	Optional
Real-Time Clock (RTC)	Yes	Yes	Yes	Yes
Micro SD Slot	Yes	Yes	Yes	Yes
UL Certification	Yes	Yes	Yes	Yes

* A: RS422/485 B:RS232/485 C: RS232 with RTS&CTS

** RS422/485 (Isolated, optional)



UL LISTED
PROG. CNTRL.
E465558

IP66
-20°C 60°C

K-SERIES

Economy HMI Panels

(For General Product Group)

Products Selection Guide

The K-series supports comprehensive LCD sizes ranging from 4.3" to 10.1" and are equipped with an ARM9 based CPU, 8M flash memory and 128KB battery backup memory. Its expansive communication interfaces; RS232/422/485, Ethernet, and USB port, with over 300 communication drivers allowing the K-series to connect easily with all types of equipments, such as motion/thermal controllers, inverters or sensors to name a few.

- 4.3"~ 10.1" wide screen TFT LCD size
- Suitable for simple & compact application
- Slim, cost effective



	PK100-WFT	PK070-WFT	PK043-WST
Size	10.1" (16:9)	7" (16:9)	4.3" (16:9)
Resolution	1024 x 600	800 x 480	480 x 272
NOR Flash Memory	8 MB	8 MB	8 MB
NAND Flash Memory	128 MB	128 MB	-
Battery Backup Memory	128 KB*	128 KB*	128 KB*
USB	1 Client ; 1 Host	1 Client ; 1 Host	1 Client ; 1 Host
Real-Time Clock (RTC)	Yes	Yes	Yes
Front Function Keys	7-keys	6-keys	-

* 1MB Battery Backed Memory Optional



IP65
0°C 50°C

T-SERIES

Enhanced HMI Panels

(For General Product Group)

The T-series supports comprehensive LCD sizes ranging from 4.3" to 15.0" and are equipped with an ARM9 based CPU, 8M flash memory and 128KB battery backup memory. Its expansive communication interfaces; RS232/422/485, Ethernet, and USB port, with over 300 communication drivers allowing the T-series to connect easily with all types of equipments, such as motion/thermal controllers, inverters or sensors to name a few.

- 4.3"~15" TFT LCD screen size
- Meets General Machinery Application
- RTC; Flash memory; Historical Data Record; Alarm Data Record



PT150-XSD

PT104-TST

PT100-WST

Size	15" (4:3)	10.4" (4:3)	10.1" (16:9)
Resolution	1024 x 768	800 x 600	1024 x 600
NOR Flash Memory	8 MB	8 MB	8 MB
NAND Flash Memory	128 MB*	128 MB*	128 MB*
Battery Backup Memory	128 KB**	128 KB**	128 KB**
COM1	RS232/422/485	RS232/422/485	RS232/422/485
COM2	A/B/C***	A/B/C***	A/B/C***
COM3	RS232 or RS485	RS232 or RS485	RS232 or RS485
COM4	-	-	-
USB	1 Client ; 1 Host	1 Client ; 1 Host	1 Client ; 1 Host
Real-Time Clock (RTC)	Yes	Yes	Yes
Front Function Keys	-	-	7-keys (Optional)
Front USB Host Port	-	Yes (Optional)	Yes (Optional)
Micro SD Slot	Yes	Yes	Yes
UL Certification	Yes	Yes	Yes

* 128MB NAND Flash only for sub-number 2 and 4

** 1 MB optional

** A: RS422/485 B:RS232/485 C: RS232 with RTS&CTS



The T-series is equipped with a high resolution TFT LCD contains 65536 colors and LED back light, which gives the display brighter look, and is more clear for highly precise operations. To confront the severe environment setting of some factories, the T-series complies with IP66 and allows for an operating temperature -10~60°C.

Moreover, Cermate also provides some options for customers to shape their own HMI tailored to their needs. For example, an aluminum front case is suited for those who prefer a more fashionable design or to operate the HMI under more harsh environment; NAND flash and micro SD provide extending the capacity of HMI; different COM port options provide additional flexibility for customers. All those features bundle with our easy-to-use programming software, PM Designer, provides you perfect automation solutions.



PT080-TST

PT070-WST

PT043-WST

PT043-WSP

Size	8" (4:3)	7" (16:9)	4.3" (16:9)	4.3" (16:9)
Resolution	800 x 600	800 x 480	480 x 272	480 x 272
NOR Flash Memory	8 MB	8 MB	8 MB	8 MB
NAND Flash Memory	128 MB*	128 MB*	128 MB*	-
Battery Backup Memory	128 KB**	128 KB**	128 KB**	128 KB**
COM1	RS232/422/485	RS232/422/485	RS232/422/485	RS232/422/485
COM2	A/B/C***	A/B/C***	A/B/C***	RS422/485
COM3	RS232 or RS485	RS232 or RS485	RS232 or RS485	RS232 or RS485
COM4	-	-	-	-
USB	1 Client ; 1 Host	1 Client ; 1 Host	1 Client ; 1 Host	1 Client ; 1 Host
Real-Time Clock (RTC)	Yes	Yes	Yes	Yes
Front Function Keys	-	6-keys (Optional)	-	23-keys
Front USB Host Port	-	Yes (Optional)	-	-
Micro SD Slot	Yes	Yes	Yes	-
UL Certification	Yes	Yes	Yes	-

* 128MB NAND Flash only for sub-number 2 and 4

** 1 MB optional

** A: RS422/485 B:RS232/485 C: RS232 with RTS&CTS



GX-SERIES

Products Selection Guide

(For General Product Group)

The GX series is a WinCE based HMI with an LCD size ranging from 7" to 15". GX is also equipped with 256MB working memory and 1GB of storage memory, that will provide a high performance operation. All the series uses a high resolution color TFT LCD with LED back light to ensure a clear display and a longer backlight life. The ultra slim design is fashionable and easily-mounted. The design is not only stylish, but made of a robust structure enabling the GX series to be used in any stringent environment.

- WinCE OS, 2D Graphic Engine; Real-Time Data Memory



Size	15" (4:3)	12.1" (4:3)	10.4" (4:3)
Resolution	1024 x 768	1024 x 768	800 x 600
Working Memory	256 MB	256 MB	256 MB
Built-in Storage Memory	1 GB*	1 GB*	1 GB*
Battery Backed RAM	1 MB	1 MB	1 MB
COM1	RS232/422/485	RS232/422/485	RS232/422/485
COM2	A/B/C**	A/B/C**	A/B/C**
COM3	RS232 or RS485	RS232 or RS485	RS232 or RS485
COM4	-	-	-
USB	1 Client ; 1 Host	1 Client ; 1 Host	1 Client ; 1 Host
Audio Out	Yes (optional)	Yes (optional)	Yes (optional)
Video In	-	-	-
Real-Time Clock (RTC)	Yes	Yes	Yes
Micro SD Slot	Yes	Yes	Yes
UL Certification	Yes	Yes	Yes

* 64MB: WinCE OS; 1GB-64MB: User

** A: RS422/485 B: RS232/485 C: RS232 with RTS&CTS



The rich communication interface of the GX series includes: 3 COM ports, Ethernet and 2 USB ports (1client, 1host), which can provide an easy connection with other devices. The GX is also customizable for your specific needs, so that we can accommodate your unique requirements. Here are some customized options: aluminum front case, audio function and micro SD or NAND flash. The GX series is what Cermate presents for open HMI users who desire for high performance products.



Size	10.1" (16:9)	8" (4:3)	7" (16:9)
Resolution	1024 x 600	800 x 600	800 x 480
Working Memory	256 MB	256 MB	256 MB
Built-in Storage Memory	1 GB*	1 GB*	1 GB*
Battery Backed RAM	1 MB	1 MB	1 MB
COM1	RS232/422/485	RS232/422/485	RS232/422/485
COM2	A/B/C**	A/B/C**	A/B/C**
COM3	RS232 or RS485	RS232 or RS485	RS232 or RS485
COM4	-	-	-
USB	1 Client ; 1 Host	1 Client ; 1 Host	1 Client ; 1 Host
Audio Out	Yes (optional)	Yes (optional)	Yes (optional)
Video In	-	-	-
Real-Time Clock (RTC)	Yes	Yes	Yes
Micro SD Slot	Yes	Yes	Yes
UL Certification	Yes	Yes	Yes

* 64MB: WinCE OS; 1GB-64MB: User

** A: RS422/485 B: RS232/485 C: RS232 with RTS&CTS



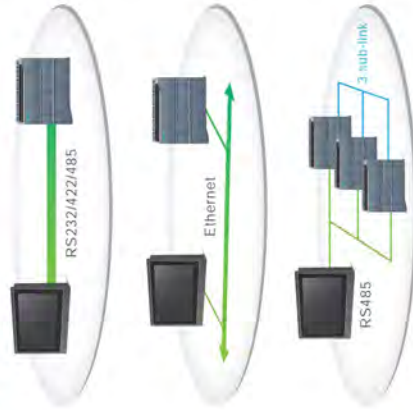
Hardware Feature—Communication

General Description

You can use serial port or ethernet to complete different type of communications. You can communicate with 1 or multiple devices directly or indirectly

Various Communication Links

► Direct Link



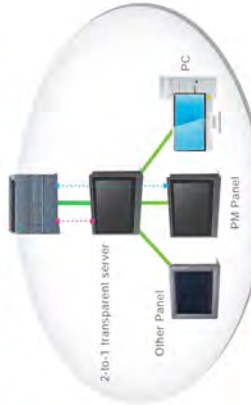
Sub-link

Using RS485 serial connection to link multiple device with same protocol, such as temperature controllers and intelligent sensors. Users can activate/stop the sub-link and save the communication status.

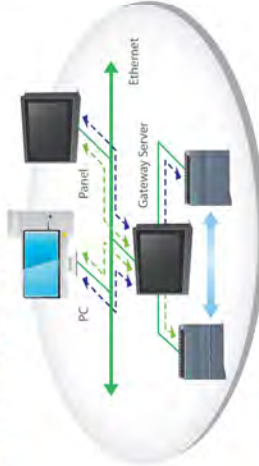
► 2 to 1 connection



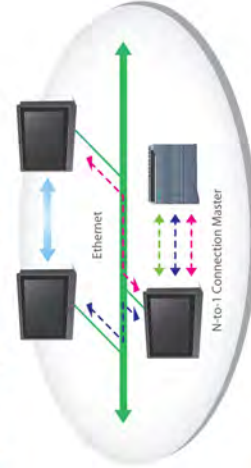
► 2 to 1 transparent connection



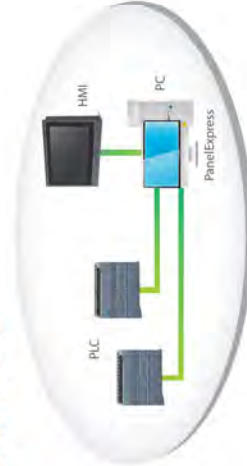
► Gateway Service



► N-to-1 Communication



► OPC Client



► VNC Server



Hardware Feature—

Cermate provides total HMI solutions for all types of automation applications.



Application Fields

Building Automation

In building automation, the HMI provides an economic and easy answer for those who need integrating and systematic solutions. Elevators, power system management, AC and alarm systems can be integrated into a more intelligent product solution. You can manage, supervise and record more easily than you've ever experienced before.

Remote Control

Factory Automation

The HMI is booming in the Factory Automation field. With a more accessible price, friendly operations and wide range of selection, successful applications are seen everywhere in our daily life. The automation system for a manufacturing process will provide a more stable output and save you time and expense.

Machine Automation

In the scope of industrialization, automation is required to provide an efficient and precise way of manufacturing. Machine automation can provide operators assistance with physical work, and greatly decrease the need for human sensory as well as mental fatigue. In a production line of machines, the HMI takes the helm of the automation process and helps you manage the whole system from top down.





PM Designer is proven in many application fields and is an easy to use integrated development tool featuring solution-oriented screen objects, high-end vector graphics, Windows fonts for multi-language applications, recipes, alarms, data loggers and operation logging. PM Designer also includes online/offline simulation and other utility programs such as Data Transfer Helper (DTH); recipes editors and text editors. PanelMaster runtime, a part of PM Designer, guarantees reliability and performance because of the minimum system overhead, high communication data rates, sub-second screen switching, and 24/7 operation.

Shortcut & Execution Toolbar

Icon Display Improves Work Efficiency

- Shortcut icons designed to show objects, figure type, and operations improving work efficiency.
- Frequently used objects and figures can be registered as Favorites.

Project Workspace

An Intuitive Tree Display Makes Runtime Development Easy

- Easy to create, develop, and manage project property efficiency by project-based management worksheets.

Screen Design Worksheet

Smart Screen Design

- Easy to view screens during runtime development, adjustable based on user-oriented application.

Message Build List

Compile & Simulate Results

- By double clicking on the error message after compilation it will automatically jump to the place where the problem is.

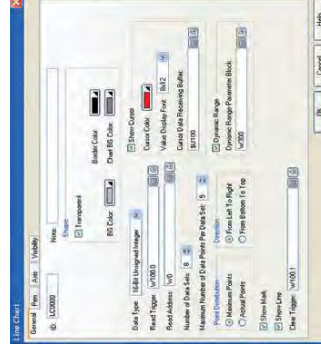
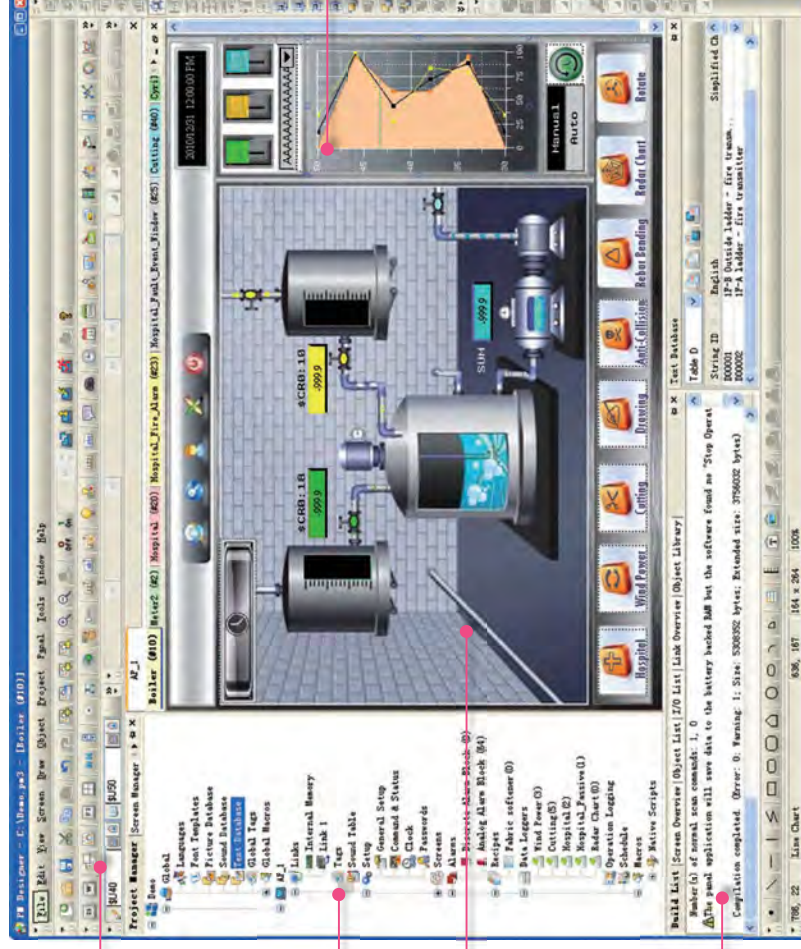
Software Features

- Allows users to switch multi-language UI dynamically, with Unicode and multilingual screen text supported.
- Provides password protection of designs, macros and upload/download operations.
- Allows to download the runtime data using serial port, Ethernet, USB and Micro SD card.
- Allows the use of USB memory sticks for trouble-free application updates.

- Provides index registers for modifying device addresses at runtime.
- Operation log helps the review and investigation of important events.
- Supports over 380 industrial communication protocols, such as SIMATIC S7-1200, BACNet MSTP/BACNet IP, and more.

Dialog Box

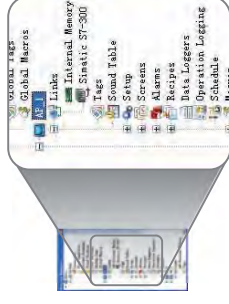
- The property dialog is displayed by double-clicking the object or figure.
- Figure changes are immediately reflected on screen, thereby simplifying the process and reducing setting errors.
- Easy to set the properties through pop-up dialog box.



► Efficient Project-based Structure to Manage Multiple Applications

Powerful integrated development studio

- One project can have many applications.
- The project tree provides all you need to manage a project.
- Global settings and resources sharable to all applications in a project.
- You can make the most out of existing projects by import/export functions for all kinds of settings.
- Containing entire project in one file makes the maintenance job easy.



► Software Functionalities to Satisfy Various Needs

Possible to achieve a mini-SCADA system

- 10 sets of languages and 20 fonts for each language (TrueType fonts supported)
- 4 communication links with the option to add more RS-485 and TCP/IP sub-links.
- 1 startup macro; 1 main macro; 4 event macros, 4 time macros, no limitation on other kinds of macros
- 64 discrete and 64 analog alarm blocks, 16 recipe blocks and 16 data loggers.
- 1 operation logger, 80 schedules, 7999 screens.

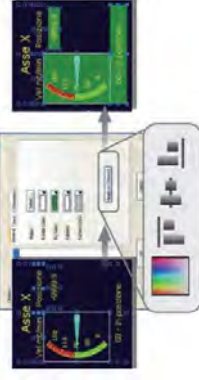


► User Friendly Tools to Make Customized Designs Easier and More Efficient

Intuitive screen editor and toolbars

- Real-time WYSIWYG allows you to see the change of object appearance at any time.
- Property dialogs with semi-transparent features will not block your view to screen objects anymore.
- Overlapped objects' properties can be changed by double-clicking the top object.
- Automatic size adjustment of characters and pictures according to the object size is supported.
- Groups a number of objects to move, resize, and modify the common attributes.
- Rotate a picture or change its tone to fit the need of an object.

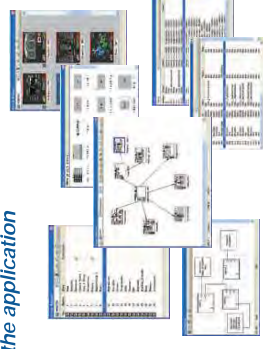
Auto Resizing, rotating & tone



► Top-down approach for planning and complete understanding of the application

Centralized configuration tools

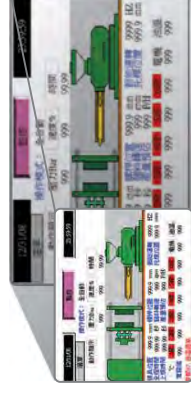
- Screen Manager - A tool for configuration and management of multiple screens
- Screen Overview - Organizing Application Screens in a Graphical Way
- Link Overview - A graphical tool for defining the communication configuration project wise
- Object Library - Sharing the User-defined Objects
- Object List - Displaying all the objects with associated I/O points of a screen in a list
- I/O List - Showing all the I/O points with their purposes of an application in a table



► Changing HMI Model Can Be Done in Seconds

Automatic size adjustment

- When changing the screen resolution, all the screen objects are automatically resized to maintain the relative positions and size ratios to the original screens.
- The screen orientation at run time can be predefined in landscape and portrait



5.7" 640x480

7" 800x480

► Thousands of Professional Pictures are provided to Beautify Your Screens

Picture libraries and picture database

- Famous industrial pictures from Symbol Factory are ready for use.
- Manufacturer made pictures are ideal for your buttons, lamps, and symbols.
- You can make your own picture libraries.
- The types of importable picture files include: BMP, JPG/JPEG), GIF, WMF, SVG(Scalable Vector Graphics) and PNG.

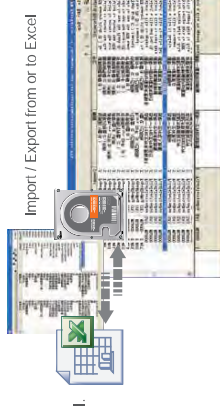


PanelMaster symbols (BMP)

► Simple Text Mapping Table Fulfills the Needs for Multiple Languages

Text database and text editor

- Text database, a collection of text tables, contains editable strings for all supported languages in the project. It supports import/export texts in MS Excel.
- Text Editor, a convenient tool for preparing and reusing text among projects; can edit all screen texts in multi-languages.



Import / Export from or to Excel

► Secure Intellectual Properties

Design Protection

- Project files, screens, macros, and password tables can be protected by different passwords.
- Copying and uploading of an application can be prohibited in advance.
- Automatically recovers data from damaged or unsaved file
- The developer password of a project or a PRP password is required to transfer an application to a HMI.



► Multilanguage Enabled UI and Applications

Multilanguage

- You can display the user interface (UI) in different languages.
- You can develop multi-language application in at most 10 languages.
- You can enter an ASCII or Western European or Cyrillic or simplified Chinese string for a variable using a character entry at runtime.



► Plenty of Solution-oriented Screen Objects

Objects

- Provides more than 70 different kinds of objects for common HMI needs, animation, sophisticated functions or industrial specific.



Parison Programmer

G Code Editor

► Supplementing and Extending Configuration for More Advanced Use Cases

Advanced Object settings

- Showing readable or precise information according to dynamic data range, scale range, and time range settings
- Displaying qualified records in alarm display and historic data table according to the query conditions.



► Provides Complete Recipe Handling Functions

Recipe blocks

- Support up to 16 different groups of recipes.
- Transfer of recipes between PanelMaster and PLCs/files is supported.
- With Recipe Editor you can edit recipes on a PC.
- Many screen objects support recipe data.

► Versatile Alarm Monitoring and Display Capabilities

Alarm processing

- Up to 64 discrete alarm blocks and 64 analog alarm blocks can be monitored and recorded.
- Up to 8 data values can be read and recorded along with an alarm event.
- A global alarm marquee is supported.
- Saving the logged alarms to a file is supported.

► Operations Can Be Recorded for Improving Quality and Efficiency

Operation logging

- The starting time and the stopping time of an application can be recorded.
- The failure of a communication link can be recorded.
- Operation Log Display lists the logged operations process for the operator to review

► Easy to configure data collections and historic data displays

Data loggers

- Can collect data from up to 16 different data sources.
- Data collection can be activated according to a set time or a trigger bit.
- You can save/load collected to/from a file by a function button or macro program.
- Use data logging macro to log processed data instead of original data.
- Use passive data logger to receive data from the primary data logger or a file

► Performing a specified operation at the designated time

Schedule

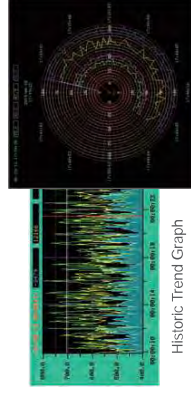
- Each schedule can be programmed to either change the value of a specified PLC location or execute a specified macro at the designated time
- Up to 80 schedules can be registered in a panel application
- Enable or disable power- on action or end action
- Operator can use Schedule setting table to modify pre-defined schedule at runtime.

S/N	Macro	Variable	Set	Repeat	Start Time	End Time	Macro
1	Macro A		ON	ON	08:00:00	22:00:00	MON
2	Macro B		ON	ON	MON 08:00:00	FRI 20:00:00	MON
3	Temp. A		ON	ON	08:00:00	17:00:00	MON
4	Temp. B		ON	ON	MON 08:00:00	THU 18:00:00	MON
5	Max Temp		ON	ON	07:20:00	20:20:00	MON
6	5 min Check		ON	ON	08:00:00	22:00:00	MON



Operation Log Display Demo	
Date	Time
31/08/09	16:56:53
31/08/09	16:56:49
31/08/09	16:56:33
31/08/09	16:56:32
31/08/09	16:56:29
31/08/09	16:56:23
31/08/09	16:56:19

Operation Log Display



Historic Trend Graph

Historic Radar Chart

► Easy-to-use Script Editor and Commands

Script editor and native script commands

- Easily compose native scripts for HMI using useful and reliable script commands with simple syntax and convenient instant help messages
- Scripts are useful for operations not supported in standard object or feature of PM Designer, such as sequential operations, conditional operations, interactive operations, file operations, data exchange between two connected devices, etc.
- Possible to implement simple communication driver.

► Offering cross-user consistency, navigation efficiency and compliance

Tag Management

- By changing tags, you can use any PLC or controller without re-developing the application.
- You can define a tag or an array tag or a structure tag to represent an address or a memory block for the application.
- Tags can be added, renamed, deleted, imported and exported, etc.

► Checking, integrating, and optimizing an application intelligently

Compiler

- Checks the correctness and consistency of all the settings and designs.
- Optimizes the communications with connected devices.
- Translates macros into compact and ready-to-execute codes.
- Builds runtime data to be executed by the HMI.

► Reduce Time and Effort to Boost Performance through Advanced Simulations

Offline simulation and online simulation

- Offline simulation function can help to experience your design result even before decide to purchase this model
- Evaluates the communication performance using online simulation before installation.



Offline Simulation

► Provides Various Choices for Application Runtime Data Transfers

Data Transfer Tool & Data Transfer Helper (DTH)

- Uses PM Designer or DTH to transfer an application's runtime data to a PanelMaster through a serial port, an Ethernet port, or a USB port anytime when that PanelMaster is running. (Some PanelMaster models may not have a client USB port to support the data transfer)
- Without a PC, transfers an application's runtime data to a PanelMaster by using an USB memory stick or Micro SD card.



► Providing all the necessary documents for the developers using the software

Help and Release Notes

- Use the search interface to return all documents that match any specified term or set of terms.
- Browse the table of contents which including reference documentation, sample codes, technical articles and more. It is in HTML format and contains over 500 topics and 1000 pictures.
- Use index to jump to some of the most popular functions or features of the software.
- Browse the changes or enhancement made to the features of the software.



Specification of X-Series

Model Name	PX150-XSD	PX121-XSD	PX104-TST	PX070-WST
Sub-Models	4 / 6 15"	4 / 6 12.1"	4 / 6 10.4"	4 / 6 7"
Max. Resolution	1024*768	1024*768	800*600	800*480
Type	TFT LCD with LED Backlight			
Max. Colors	16-bit/24-bit (Software selectable)			
Backlight Life (hr)	50000	50000	20000	20000
Display Contrast	700	700	400	500
Luminance (cd/m2)	350	500	400	300
Touch Panel	5-wire Analog Resistive Type			
CPU	RISC ARM11 800MHz			
Battery Backup SRAM	1MB			
Working Memory	256MB			
NAND Flash ROM	1GB			
Real-Time Clock (RTC)	YES			
Micro SD Slot	YES			
USB Client	YES (USB 2.0)			
USB Host	YES (USB 1.1)			
COM1 / COM3	COM1: RS232/422/485, COM3: RS232 (optional: RS485)			
COM2	A-RS422/485 B-RS232/485 C-RS232 with RTS&CTS			
COM4	Sub-Model 6: RS422/485			
Ethernet	YES			
Front Function Keys	N/A			
Audio Out (optional)	Sub-Model 6: YES			
Video In (optional)	Sub-Model 6: YES (Video Module Depth= 20mm)			
Front USB Host Port	N/A			
Input	24VDC±10% Isolated			
Consumption	20W			
Operating Temperature	-20°C~60°C (-25°C~70°C optional with AL front, CE certified only)			
Relative Humidity	10%~90%			
Shock (operation)	10~55Hz (X,Y,Z direction, 1G, 30 Mins shock testing)			
EMI	FCC Part 15 Class A			
CE	EN61000-6-2, EN61000-6-4			
UL Certification	YES			
Ingress Protection	IP66			
Cooling	Natural Cooling			
Dimension WxHxD (mm)	399.1 x 297.6 x 55.0	317.4 x 243.8 x 58.0	280.3 x 222.3 x 45.0	213.6 x 158.6 x 40.5
Cutout Dimension AxB (mm)	384.5 x 283.0	301.5 x 228.0	259.5 x 201.5	192.0 x 138.5
Net Weight (kg)	2.68	1.9	1.25	0.8

Specification of K-Series

Model Name	PK100-WFT	PK070-WFT	PK043-WST
Sub-Models	20 / 40 10.1"	20 / 40 7.0"	10 / 30 4.3"
Max. Resolution	1024*600	800*480	480*272
Type	TFT LCD with LED Backlight		
Max. Colors	16-bit		
Backlight Life (hr)	20000	20000	20000
Display Contrast	500	500	500
Luminance (cd/m2)	150	250	250
Touch Panel	4-wire Analog Touch Panel		
CPU	RISC ARM9 32Bit		
Battery Backup SRAM	128KB (optional: 1MB)		
Working Memory	32MB		
Built-in Storage Memory	8MB+128MB (NAND Flash)		
Real-Time Clock (RTC)	YES		
Micro SD Slot	N/A		
USB Client	YES (USB 2.0)		
USB Host	YES (USB 1.1)		
COM1 / COM3	COM1: RS232/RS422/RS485, COM3: RS232 (optional: RS485)		
COM2	N/A		
COM4	N/A		
Ethernet	Sub-Model 40: YES		
Front Function Keys	7-keys	6-keys	N/A
Audio Out (optional)	N/A		
Video In (optional)	N/A		
Front USB Host Port	N/A		
Input	24VDC±10% Isolated		
Consumption	20W	20W	10W
Operating Temperature	0°C~50°C		
Relative Humidity	10%~90%		
Shock (operation)	10 ~ 55Hz(X, Y,Z direction, 1G, 30 Mins shock testing)		
EMI	FCC Part 15 Class A		
CE	EN61000-6-2, EN61000-6-4		
UL Certification	N/A		
Ingress Protection	IP65		
Cooling	Natural Cooling		
Dimension WxHxD (mm)	270.1 x 212.1 x 42.5	203.5 x 149.0 x 33.0	130.0 x 106.2 x 39.0
Cutout Dimension AxB (mm)	259.5 x 201.5	192.0 x 138.5	119.0 x 93.0
Net Weight (kg)	1.1	0.65	0.35



Model Name		PT150-XSD	PT104-TST	PT100-WST
	Sub-Models	4	2 / 4	2 / 4
	Size	15"	10.4"	10.1"
	Max. Resolution	1024*768	800*600	1024*600
Display	Type	TFT LCD with LED Backlight		
	Max. Colors	16-bit		
	Backlight Life (hr)	50000	20000	20000
	Display Contrast	700	400	500
	Luminance (cd/m2)	350	400	150
	Touch Panel	4-wire Analog Resistive Type		
	CPU	RISC ARM9 32Bit		
	Battery Backup SRAM	128KB (optional: 1MB)		
	Working Memory	64MB		
Built-in Storage Memory	Sub-Model 2 / 4: 8MB+128MB (NAND Flash)			
Real-Time Clock (RTC)	YES			
Communication Interface	Micro SD Slot	Sub-Model 2/4: YES		
	USB Client	YES (USB 2.0)		
	USB Host	YES (USB 1.1)		
	COM1 / COM3	COM1: RS232/422/485; COM3: RS232 (optional: RS485)		
	COM2	A-RS422/485 B-RS232/485 C-RS232 with RTS&CTS		
	COM4	N/A		
	Ethernet	Sub-Model 4: YES		
Front Function Keys	N/A		N/A	7-keys (optional)
Audio Out (optional)	N/A			
Video In (optional)	N/A			
Front USB Host Port	N/A	USB 1.1 (optional)		USB 1.1 (optional)
Power	Input	24VDC±10% Isolated		
	Consumption	20W		
	Operating Temperature	-10°C~60°C		
Environment	Relative Humidity	10%~90%		
	Shock (operation)	10 ~ 55Hz(X,Y,Z direction, 1G, 30 Mins shock testing)		
	EMI	FCC Part 15 Class A		
	CE	EN61000-6-2, EN61000-6-4		
	UL Certification	YES		
Ingress Protection	IP66			
Cooling	Natural Cooling			
	Dimension WxHxD (mm)	399.1 x 297.6 x 55	270.1 x 212.1 x 42.5	270.1 x 212.1 x 42.5
	Cutout Dimension AxB (mm)	384.5 x 283.0	259.5 x 201.5	259.5 x 201.5
Net Weight (kg)	2.68	1.2	1.2	



Model Name		PT080-TST	PT070-WST	PT043-WST	PT043-WSP
	Sub-Models	2 / 4	2 / 4	1 / 4	1
	Size	8"	7"	4.3"	4.3"
	Max. Resolution	800*600	800*480	480*272	480*272
Display	Type	TFT LCD with LED Backlight			
	Max. Colors	16-bit			
	Backlight Life (hr)	20000	20000	20000	20000
	Display Contrast	500	500	500	500
	Luminance (cd/m2)	250	300	400	250
	Touch Panel	4-wire Analog Resistive Type			
CPU	CPU	RISC ARM9 32Bit			
	Battery Backup SRAM	128KB (optional: 1MB)			
	Working Memory	64MB	32MB		
Built-in Storage Memory	Built-in Storage Memory	Sub-Model 1: 8MB, Sub-Model 2/4: 8MB+128MB (NAND Flash)			
	Real-Time Clock (RTC)	YES			
	Micro SD Slot	Sub-Model 2/4: YES			
Communication Interface	USB Client	YES (USB 2.0)			
	USB Host	YES (USB 1.1)			
	COM1 / COM3	COM1: RS232/422/485; COM3: RS232 (optional: RS485)			
	COM2	A-RS422/485 B-RS232/485 C-RS232 with RTS&CTS			
	COM4	N/A			
Front Function Keys	Ethernet	Sub-Model 4: YES			
	Front Function Keys	N/A	6-keys (optional)	N/A	23-keys
	Audio Out (optional)	N/A			
Video In (optional)	Video In (optional)	N/A			
	Front USB Host Port	N/A	USB 1.1 (optional)	N/A	N/A
	Input	24VDC±10% Isolated			
Power	Consumption	20W	10W		
	Operating Temperature	-10°C~60°C			
	Relative Humidity	10%~90%			
Environment	Shock (operation)	10 ~ 55Hz(X,Y,Z direction, 1G, 30 Mins shock testing)			
	EMI	FCC Part 15 Class A			
	CE	EN61000-6-2, EN61000-6-4			
	UL Certification	YES	N/A		
	Ingress Protection	IP66			
Dimension	Cooling	Natural Cooling			
	Dimension WxHxD (mm)	231.5 x 174.5 x 42.5	188.0 x 143.3 x 36.0	130.0 x 106.2 x 39.0	172.0 x 102.0 x 30.0
	Cutout Dimension AxB (mm)	221.0 x 164.0	175.0 x 132.5	119.0 x 93.0	160.5 x 89.5
	Net Weight (kg)	0.93	0.6	0.35	0.33





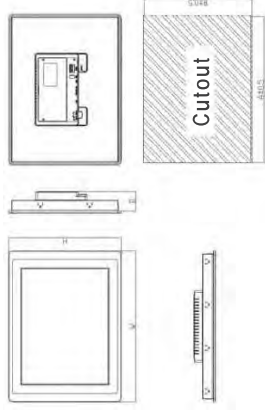
Model Name		GX615-XSD	GX612-XSD	GX610-TST
Sub-Models	Size	4 / 5 15"	4 / 5 12.1"	4 / 5 10.4"
	Max. Resolution	1024*768	1024*768	800*600
Display	Type	TFT LCD with LED Backlight		
	Max. Colors	16-bit		
	Backlight Life (hr)	50000	50000	20000
	Display Contrast	700	700	400
Touch Panel	Luminance (cd/m2)	350	500	400
		5-wire Analog Resistive Type	4-wire Analog Resistive Type	
CPU		RISC ARM11 800MHz		
Battery Backup SRAM		1MB		
Working Memory		256MB		
Built-in Storage Memory		1GB (64MB: Built-in Win CE V6.0 R3 OS)		
Real-Time Clock (RTC)		YES	YES	
	Micro SD Slot	YES	YES	
Communication Interface	USB Client	YES (USB 2.0)		
	USB Host	YES (USB 1.1)		
	COM1 / COM3	COM1: RS232/RS422/RS485; COM3: RS232 (optional: RS485)		
	COM2	A-RS422/485 B-RS232/485 C-RS232 with RTS&CTS		
Ethernet	COM4	N/A		
	Ethernet	YES		
Front Function Keys		N/A		
Audio Out (optional)		Sub-Model 5: YES		
Video In (optional)		N/A		
Front USB Host Port		N/A		
Power	Input	24VDC±10% Isolated		
	Consumption	20W		
Environment	Operating Temperature	-20°C~60°C (-25°C~70°C optional with AL front, CE certified only)		
	Relative Humidity	10%~90%		
Shock (operation)		10~55Hz (X,Y,Z direction, 1G, 30 Mins shock testing)		
	EMI	FCC Part 15 Class A		
	CE	EN61000-6-2, EN61000-6-4		
	UL Certification	YES		
Ingress Protection		IP66		
Cooling		Natural Cooling		
Dimension WxHxD (mm)		399.1 x 297.6 x 55.0	317.4 x 243.8 x 58.0	280.3 x 222.3 x 45.0
	Cutout Dimension AxB (mm)	384.5 x 283.0	301.5 x 228.0	259.5 x 201.5
Net Weight (kg)		2.68	1.9	1.25



Model Name		GX611-WST	GX608-TST	GX607-WST
Sub-Models	Size	4 / 5 10.1"	4 / 5 8"	4 / 5 7"
	Max. Resolution	1024*600	800*600	800*480
Display	Type	TFT LCD with LED Backlight		
	Max. Colors	16-bit		
	Backlight Life (hr)	20000	20000	20000
	Display Contrast	500	500	500
Touch Panel	Luminance (cd/m2)	180	250	300
		4-wire Analog Resistive Type		
CPU		RISC ARM11 800MHz		
Battery Backup SRAM		1MB		
Working Memory		256MB		
Built-in Storage Memory		1GB (64MB: Built-in Win CE V6.0 R3 OS)		
Real-Time Clock (RTC)		YES	YES	
	Micro SD Slot	YES	YES	
Communication Interface	USB Client	YES (USB 2.0)		
	USB Host	YES (USB 1.1)		
	COM1 / COM3	COM1: RS232/RS422/RS485; COM3: RS232 (optional: RS485)		
	COM2	A-RS422/485 B-RS232/485 C-RS232 with RTS&CTS		
Ethernet	COM4	N/A		
	Ethernet	YES		
Front Function Keys		N/A		
Audio Out (optional)		Sub-Model 5: YES		
Video In (optional)		N/A		
Front USB Host Port		N/A		
Power	Input	24VDC±10% Isolated		
	Consumption	20W		
Environment	Operating Temperature	-20°C~60°C (-25°C~70°C optional with AL front, CE certified only)		
	Relative Humidity	10%~90%		
Shock (operation)		10~55Hz (X,Y,Z direction, 1G, 30 Mins shock testing)		
	EMI	FCC Part 15 Class A		
	CE	EN61000-6-2, EN61000-6-4		
	UL Certification	YES		
Ingress Protection		IP66		
Cooling		Natural Cooling		
Dimension WxHxD (mm)		280.3 x 222.3 x 45.0	241.6 x 184.6 x 46.0	213.6 x 158.6 x 40.5
	Cutout Dimension AxB (mm)	259.5 x 201.5	221.0 x 164.0	192.0 x 138.5
Net Weight (kg)		1.25	1.1	0.8

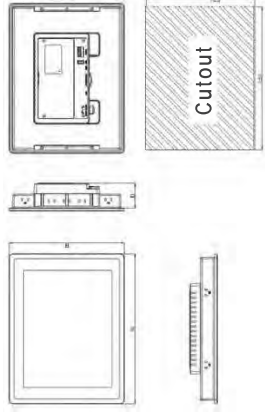
PT150-XSD / PX150-XSD / GX615-XSD

Dimension WxH 399.1 x 297.6mm
Cutout Dimension AxB 384.5 x 283.0mm



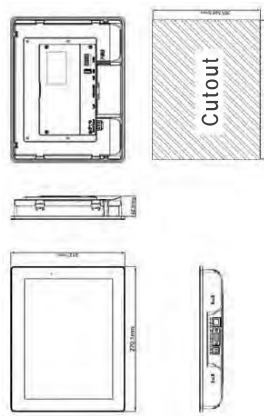
PX121-XSD / GX612-XSD

Dimension WxH 317.4 x 243.8mm
Cutout Dimension AxB 301.5 x 228.0mm



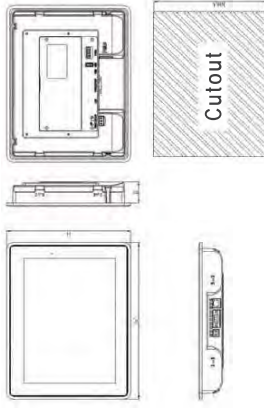
PT104-TST / PT100-WST

Dimension WxH 270.1 x 212.1mm
Cutout Dimension AxB 259.5 x 201.5mm



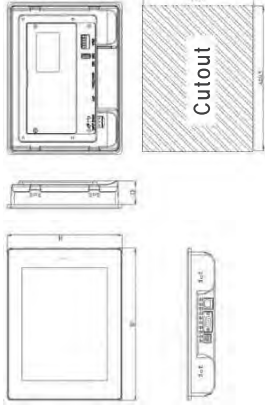
PX104-TST / GX610-TST / GX611-WST

Dimension WxH 280.3 x 222.3mm
Cutout Dimension AxB 259.5 x 201.5mm



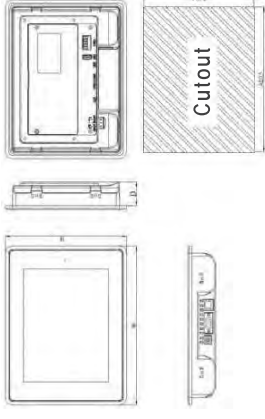
PT080-TST

Dimension WxH 231.5 x 174.5mm
Cutout Dimension AxB 221.0 x 164.0mm



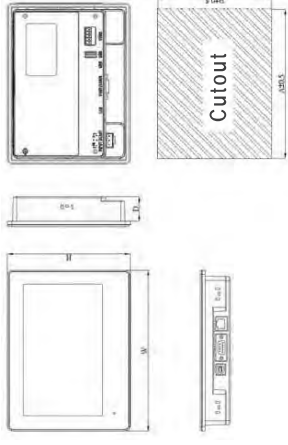
GX608-TST

Dimension WxH 241.6 x 184.6mm
Cutout Dimension AxB 221.0 x 164.0mm



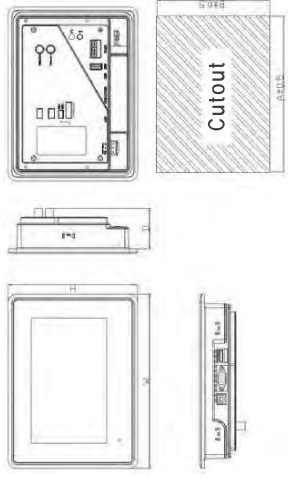
PT070-WST

Dimension WxH 188.0 x 143.3mm
Cutout Dimension AxB 175.0 x 132.5mm



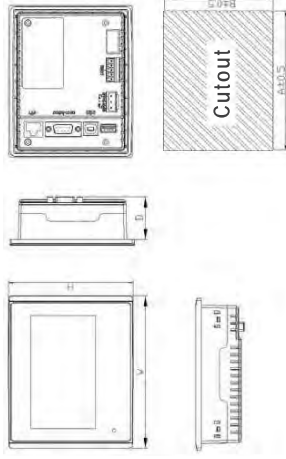
PX070-WST / GX607-WST

Dimension WxH 213.6 x 158.6mm
Cutout Dimension AxB 192.0 x 138.5mm



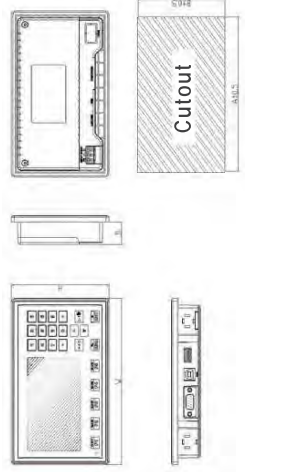
PT043-WST

Dimension WxH 130.0 x 106.2mm
Cutout Dimension AxB 119.0 x 93.0mm



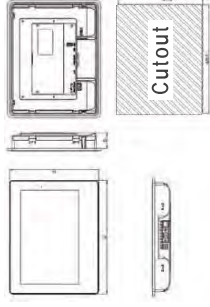
PT043-WSP

Dimension WxH 172.0 x 102.0mm
Cutout Dimension AxB 160.5 x 89.5mm



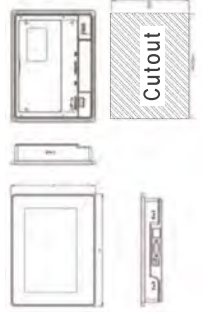
PK100

Dimension WxH 270.1 x 212.1mm
Cutout Dimension AxB 259.5 x 201.5mm



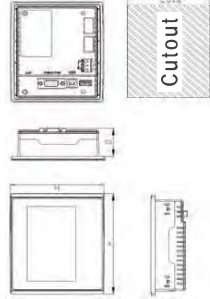
PK070

Dimension WxH 203.5 x 149.0mm
Cutout Dimension AxB 192.0 x 138.5mm



PK043

Dimension WxH 130.0 x 106.2mm
Cutout Dimension AxB 119.0 x 93.0mm





Driver List

Communication Port (COM)

Applicable PLC Controllers

Brand	Model
ABIDO Automation Co., Ltd	AD-4041 Weighing Indicator
Adico Powertronic Co., Ltd.	ACKR20 284 Device/Slave (RTU)
	MD/A/SAS Series Inverter (RTU)
	BLD/MS Series (RTU)
Advantech	ADAM-PLC Modbus MASTER
	ADAM-PLC Modbus RTU
	ADAM-4000 (ASCII)
ALGO Technologies Corporation	SE5000 Series (Modbus RTU)
	Micrologix 1000/1500
	SIC 5/03, 5/04
Allen Bradley	DH-485 (COM)
	PLC-5
	SIC 5/03, 5/04 (CRC)
ARIACO Technology	FC Type1 (Modbus)
	Modbus Master (RTU)
Astrada HMI	Modbus Device/Slave (RTU)
	Modbus Master (RTU, Quantum)
	Modbus Master (RTU, Non-volatile slave data)
Automation Technology Co., Ltd	BLDC NLV/KLV Series
Banner Engineering Intl Inc.	BSP01 Series
CAPAC	TC
CHINO Corporation	DB1000 Digital Indicating Controller (ASCII)
	NFO Controllers
	FCT Controllers
	SD Drivers
CMZ Sistemi Elettronici	MDM Drivers
	IMS Servo Controller
CTB Technologies Corporation	VLT 2800 Series (F.C Protocol)
Danfoss Group	Modbus RTU (COM port)
DEIF A/S	WSS/WSS-L
	DVP-ES/SS/IE/PH
	DVP-ES/SS/IE/PH (No block read)
	DVP-SV/RTU
	VFD-M Inverter (ASCII)
	VFD-B Inverter (ASCII)
Dalia Corporation	DTC1000/2000 Temperature (ASCII)
	DTC Temperature (ASCII)
	ASDA-A Servo Controller (ASCII)
	ASDA-B Servo Controller (ASCII)
	ASDA-A2 Servo Controller (ASCII)
Dirise Electric Technology Co., Ltd	DRS2800 Series Inverter
	DRS2800 M Series Inverter
Dirise Electric Technology Co., Ltd	EC Series (RTU)
Emerson Network Power	EV1000 Series Variable Speed Driver
Epson Corporate	Epson LQ Matrix Printer
	Eura EF15/1N
Eura Drivers Electric Corp.	Eura EP2N
	Eura Inverter (Modbus RTU)
	Eura Inverter (Modbus ASCII)
Fatek Automation Corp.	FATEK FBS/FBe
Festo Corporation	FFC/PEC Series
	N8 Series
	PAR Series Temperature (RTU)
Fuji Electric Corporation	FREMIC-V300 (RTU)
	FREMIC-300G/110/11 (Fuji)
	FREMIC-Mini/TEco/Multi/Mega (RTU)
FWK Automation Co., Ltd.	Frees Inverter
	F0 Series SNIP
GE Corporation	VersaMax Series (SNIP)
	90 and RX3i Series (SNIP)
	90 Series CCM
	SE5000
Gigaset Technology Co., Ltd.	GA400 Temperature (RTU)
GOFAST Corporation	NC Series
Hawell Technology Co., Ltd	HW Series (RTU)
Hanbell Precision Machinery Co., Ltd	Air Screw Compressor
	SJ200 Inverter
Hilachi Industrial Equipment Systems Co., Ltd	H/EH Series
	H/EH Series (Procedure 1)
	H-252C
	AD Series Servo Drives
	Computer as Slave (COM)
	Computer as Master (COM)
Hitech	Computer as Slave V2 (COM)
	Computer as Master V2 (COM)
Holip Electronic Technology Co., Ltd	HLCP-A/-C/-P

Brand	Model
Honeywell	BACnet/MSTP
	BACnet
	Modbus Device/Slave (RTU, 255)
	Modbus Device/Slave (RTU, 255, NoBlock)
Hunjeon Electronic Co., Ltd.	H-TCnet PID CONTROLLER
IFCCO	H2u (CPU Inverter (RTU)
	H2u (CPU Inverter (RTU-1)
Invanance Control Technology Co., Ltd	MD Series Inverter (RTU-1)
	IS Servo (RTU)
Integrated Flow Systems	IPurge-Source Controller
JETTER	NANO Series
	JelControl 24x Series
	KV Series
Keyence Corp.	KV-1000
	KV-120V KV-NANO
	KV-120
Klockner Moeller Corporation	PS4-201-MM1
	SUCONET K
	K Sequence Series
Koyo Electric Corp.	Direct Logic Series
	Direct 06 Series (K Sequence)
	Direct 06 Series (DirectNET)
Lenze Drive Systems GmbH	93xx Servo Controllers (LECOM A/B)
	Master-K Series CNet
	K1205 CPU Port
	Master-K Loader
LG Industrial Systems	XBMM-DR165
	GLDFA GM Series CNet
	XEC/XGI CNet
	XGT/XGK (CPU)
	XGL-C22A
LG System	LGA Series(as Slave)
	LGA Series (as Master)
Liyan Electric Industrial Ltd.	EX Series (CPU Port)
Lusi Antriebsstechnik GmbH	LusBus Servo/CDE Series
	LusBus CDD Series
	FP Series Computer Link
Malsushia Electric Works	VFOC Series Inverter
	VFOC Series Inverter
Maxthermo	MC2 PID Controller
Mean Well Enterprises Co., Ltd.	MC 5738 (RTU)
Megmet	PRETA
Micro Trend Corporation	MC Series (RTU)
Mirle Automation Corporation	UTC Servo Controller
	nDX Controller
	Melsec-FX (CPU Port)
	Melsec-Q/OnA (Link Port)
	Melsec-Q/OnA1 (CPU Port)
	Melsec-Q/OnA2 (CPU Port)
	Melsec-Q/OnA3 (CPU Port)
	Melsec-Q/OnA4 (CPU Port)
	Melsec-Q/OnA5 (CPU Port)
	Melsec-Q/OnA6 (CPU Port)
	Melsec-Q/OnA7 (CPU Port)
	Melsec-Q/OnA8 (CPU Port)
	Melsec-Q/OnA9 (CPU Port)
	Melsec-Q/OnA10 (CPU Port)
	Melsec-Q/OnA11 (CPU Port)
	Melsec-Q/OnA12 (CPU Port)
	Melsec-Q/OnA13 (CPU Port)
	Melsec-Q/OnA14 (CPU Port)
	Melsec-Q/OnA15 (CPU Port)
	Melsec-Q/OnA16 (CPU Port)
	Melsec-Q/OnA17 (CPU Port)
	Melsec-Q/OnA18 (CPU Port)
	Melsec-Q/OnA19 (CPU Port)
	Melsec-Q/OnA20 (CPU Port)
	Melsec-Q/OnA21 (CPU Port)
	Melsec-Q/OnA22 (CPU Port)
	Melsec-Q/OnA23 (CPU Port)
	Melsec-Q/OnA24 (CPU Port)
	Melsec-Q/OnA25 (CPU Port)
	Melsec-Q/OnA26 (CPU Port)
	Melsec-Q/OnA27 (CPU Port)
	Melsec-Q/OnA28 (CPU Port)
	Melsec-Q/OnA29 (CPU Port)
	Melsec-Q/OnA30 (CPU Port)
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	Melsec-Q/OnA67 (CPU Port)
	Melsec-Q/OnA68 (CPU Port)
	Melsec-Q/OnA69 (CPU Port)
	Melsec-Q/OnA70 (CPU Port)
	Melsec-Q/OnA71 (CPU Port)
	Melsec-Q/OnA72 (CPU Port)
	Melsec-Q/OnA73 (CPU Port)
	Melsec-Q/OnA74 (CPU Port)
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	Melsec-Q/OnA81 (CPU Port)
	Melsec-Q/OnA82 (CPU Port)
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	Melsec-Q/OnA85 (CPU Port)
	Melsec-Q/OnA86 (CPU Port)
	Melsec-Q/OnA87 (CPU Port)
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	Melsec-Q/OnA119 (CPU Port)
	Melsec-Q/OnA120 (CPU Port)
	Melsec-Q/OnA121 (CPU Port)
	Melsec-Q/OnA122 (CPU Port)
	Melsec-Q/OnA123 (CPU Port)
	Melsec-Q/OnA124 (CPU Port)
	Melsec-Q/OnA125 (CPU Port)
	Melsec-Q/OnA126 (CPU Port)
	Melsec-Q/OnA127 (CPU Port)
	Melsec-Q/OnA128 (CPU Port)
	Melsec-Q/OnA129 (CPU Port)
	Melsec-Q/OnA130 (CPU Port)
	Melsec-Q/OnA131 (CPU Port)
	Melsec-Q/OnA132 (CPU Port)
	Melsec-Q/OnA133 (CPU Port)
	Melsec-Q/OnA134 (CPU Port)
	Melsec-Q/OnA135 (CPU Port)
	Melsec-Q/OnA136 (CPU Port)
	Melsec-Q/OnA137 (CPU Port)
	Melsec-Q/OnA138 (CPU Port)
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	Melsec-Q/OnA144 (CPU Port)
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	Melsec-Q/OnA146 (CPU Port)
	Melsec-Q/OnA147 (CPU Port)
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	Melsec-Q/OnA149 (CPU Port)
	Melsec-Q/OnA150 (CPU Port)
	Melsec-Q/OnA151 (CPU Port)
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	Melsec-Q/OnA153 (CPU Port)
	Melsec-Q/OnA154 (CPU Port)
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	Melsec-Q/OnA159 (CPU Port)
	Melsec-Q/OnA160 (CPU Port)
	Melsec-Q/OnA161 (CPU Port)
	Melsec-Q/OnA162 (CPU Port)
	Melsec-Q/OnA163 (CPU Port)
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	Melsec-Q/OnA171 (CPU Port)
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	Melsec-Q/OnA173 (CPU Port)
	Melsec-Q/OnA174 (CPU Port)
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	Melsec-Q/OnA177 (CPU Port)
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	Melsec-Q/OnA180 (CPU Port)
	Melsec-Q/OnA181 (CPU Port)
	Melsec-Q/OnA182 (CPU Port)
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	Melsec-Q/OnA186 (CPU Port)
	Melsec-Q/OnA187 (CPU Port)
	Melsec-Q/OnA188 (CPU Port)
	Melsec-Q/OnA189 (CPU Port)
	Melsec-Q/OnA190 (CPU Port)
	Melsec-Q/OnA191 (CPU Port)
	Melsec-Q/OnA192 (CPU Port)
	Melsec-Q/OnA193 (CPU Port)
	Melsec-Q/OnA194 (CPU Port)
	Melsec-Q/OnA195 (CPU Port)
	Melsec-Q/OnA196 (CPU Port)
	Melsec-Q/OnA197 (CPU Port)
	Melsec-Q/OnA198 (CPU Port)
	Melsec-Q/OnA199 (CPU Port)
	Melsec-Q/OnA200 (CPU Port)
	Melsec-Q/OnA201 (CPU Port)
	Melsec-Q/OnA202 (CPU Port)
	Melsec-Q/OnA203 (CPU Port)
	Melsec-Q/OnA204 (CPU Port)
	Melsec-Q/OnA205 (CPU Port)
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	Melsec-Q/OnA207 (CPU Port)
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	Melsec-Q/OnA218 (CPU Port)
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	Melsec-Q/OnA229 (CPU Port)
	Melsec-Q/OnA230 (CPU Port)
	Melsec-Q/OnA231 (CPU Port)
	Melsec-Q/OnA232 (CPU Port)
	Melsec-Q/OnA233 (CPU Port)
	Melsec-Q/OnA234 (CPU Port)
	Melsec-Q/OnA235 (CPU Port)
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	Melsec-Q/OnA239 (CPU Port)
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	Melsec-Q/OnA330 (CPU Port)
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	Melsec-Q/OnA336 (CPU Port)
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	Melsec-Q/OnA341 (CPU Port)
	Melsec-Q/OnA342 (CPU Port)
	Melsec-Q/OnA343 (CPU Port)
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	Melsec-Q/OnA375 (CPU Port)
	Melsec-Q/OnA376 (CPU Port)
	Melsec-Q/OnA377 (CPU Port)
	Melsec-Q/OnA378 (CPU Port)
	Melsec-Q/OnA379 (CPU Port)
	Melsec-Q/OnA380 (CPU Port)
	Melsec-Q/OnA381 (CPU Port)
	Melsec-Q/OnA382 (CPU Port)

Accessories & Others

Cable		Download Cable (Serial Port)	
FCB-FE0-009		D-sub 9 pins (male)	D-sub 9 pins (female)
FCB-FE0-011		D-sub 9 pins (male)	FBs 4 pins (male)
FCB-FE0-018		D-sub 9 pins (male)	FX 8 pins (male)
FCB-FE0-019		D-sub 9 pins (male)	FP 5 pins (male)
FCB-XD0-039		Type A	Type B
UR25		USB Download Cable	
UR43		USB-to-Serial CABLE	
Others		USB-RS232/422/485	
HPB-CER-001/002		1. UR43-232M9-B1L20C01—USB to Cermate HMI cable 2. UR43-422R8-B1L20M01—USB to Mitsubishi PLC cable 3. UR43-485M9-B1L20S01—USB to Siemens PLC PPI cable	
HMB-CER-017		1. Jumper Selection 2. USB interface 3. D-SUB 25M interface 4. D-SUB 09M interface	
HMB-CER-022		Isolated Communication Converter	
PIM02-L00SS-W1C00			
Screen Protector		P2M-WD0-406 (Suitable for 3.5" / 4.3" / 5.6" / 5.8") P2M-ET0-022 (Suitable for 7.0" / 8.0") P2M-ET0-023 (Suitable for 10.1" / 10.4" / 12.1") P2M-ET0-024 (Suitable for 15")	

PANEL EXPRESS

Designed for Convenience

PanelExpress is a Windows based HMI runtime. It enables you to utilize the resources of a PC, such as computation power, multimedia, and bigger screen, to realize a high-end sophisticated HMI. Its configuration software, PM Designer, is also the development tool for K/IX-Series RTOS based HMI products. Thanks to the cross platform flexibility offered by PM Designer, switching hardware for performance becomes an easy job.



General Features

- Cost effective Windows based HMI runtime
- Over 50 of screen objects can fulfill all types of HMI operating and viewing needs for machine automation
- Supports 16 communication links for different application
- No limitation on the internal I/O points used in an application
- Supports over 380 PLC communication protocols
- Supports data collection, alarm monitoring, recipe handling and history of operation logging
- Provides a complete set of useful native script commands. Script programs can be embedded in objects, screens and the global process

Advanced Features

- Number of communication links can be up to 248
- Monitors up to 64 discrete alarm blocks and 64 analog alarm blocks. Up to 65535 alarms can be defined
- Supports Access, My SQL and SOL databases for your application data
- Provides customization tool for report generation



X-Series

Model Name
PX PX-Series

Resolution
T 800x600
W 480x272/800x480/1024x600
X 1024x768

LCD Size
070 7"
104 10.4"
121 12.1"
150 15"

Operation
S Standard Mode
K Front Key + USB
U Front USB
X Extension Key
F Front Key

Material & Case Color
F Plastic/Silver-Black
B Plastic/Black
U Front Aluminum Case/Silver-Black

Com2
A RS422/485
B RS232/485
C RS232(RTS/CTS)

Sub Model
4 1GB NAND Flash; RTC;
5 4 + Audio Out
6 5 + Camera Module + COM4

Mode
T 4-wires Touch
D 5-wires Touch
H Handheld (Black)
J Handheld (Orange)

Touch & PCB Coating
3 Enhance PCB Coating
5 5V Codec Touch I.C.
6 12V Codec Touch I.C.

Com3 Spec. & Temp.
R Plastic: Com3 RS232 (-10°C ~ 60°C)
Alum.: Com3 RS232 (-20°C ~ 60°C)
Q Plastic: Com3 RS485 (-10°C ~ 60°C)
Alum.: Com3 RS485 (-20°C ~ 70°C)
H Alum.: Com3 RS232 (-25°C ~ 70°C)
G Alum.: Com3 RS485 (-25°C ~ 70°C)

BKRAM & Memory
4 1MB BK Ram

OEM Code
00(Empty) Standard
01-FF For OEM customer

K-Series

Model Name
PK PK-Series

Resolution
W 480x272/800x480/1024x600

LCD Size
043 4.3"
070 7"
100 10.1"
121 12.1"

Operation
S Standard Mode
F Front Key

Material & Case Color
P Plastic/Gray
N Openframe

Com2
0 Without Com2

Sub Model
1 Built-in 5V Touch I.C. with
PCB Normal Coating
3 Enhance PCB Coating

Mode
T Touch Panel

Touch & PCB Coating
1 Built-in 5V Touch I.C. with
PCB Normal Coating
3 Enhance PCB Coating

Com3 Spec. & Temp.
R Plastic: Com3 RS232 (0°C ~ 50°C)
Q Plastic: Com3 RS485 (0°C ~ 50°C)

BKRAM & Memory
1 128KB BK Ram
4 1MB BK Ram

OEM Code
00(Empty) Standard
01-FF For brand label customers

T-Series

Model Name
PT PT-Series

Resolution
T 800x600
A 320x234
W 480x272/800x480
X 1024x768

LCD Size
043 4.3"
070 7"
100 10.1"
104 10.4"
121 12.1"
150 15"

Operation
S Standard Mode
K Front Key + USB
U Front USB
X Extension Key
F Front Key

Material & Case Color
F Plastic/Silver-Black
W Plastic/Ivory-White Color
L Plastic/Silver-Black/Wide
B Plastic/Black Color
V Front Aluminum Case/Silver
U Front Aluminum Case/Silver-Black
N Openframe

Com2
O Without Com2
A RS422/485
B RS232/485
C RS232(RTS/CTS)

Sub Model
0 No Battery (No BKRAM); No RTC
1 With RTC
2 With 128MB NAND Flash /
Micro SD Slot; With RTC
3 1 + Ethernet Port
4 2 + Ethernet Port
5 4 + Audio Out

Mode
D 5-wires Touch
H Handheld (Black)
J Handheld (Orange)
K Key Model

Touch & PCB Coating
1 Built-in 5V Touch I.C.
2 Built-in 12V Touch I.C.
3 Enhance PCB Coating
5 5V Codec Touch I.C.
6 12V Codec Touch I.C.

Com3 Spec. & Temp.
R Plastic: Com3 RS232 (-10°C ~ 60°C)
Alum.: Com3 RS232 (-20°C ~ 60°C)
Q Plastic: Com3 RS485 (-10°C ~ 60°C)
Alum.: Com3 RS485 (-20°C ~ 70°C)
H Alum.: Com3 RS232 (-25°C ~ 70°C)
G Alum.: Com3 RS485 (-25°C ~ 70°C)

BKRAM & Memory
0 Without BK Ram
1 128KB BK Ram
4 1MB BK Ram

OEM Code
00(Empty) Standard
01-FF For brand label customer

GX-Series

Model Name
GX GX-Series

Resolution
T 800x600
W 800x480/1024x600
X 1024x768

LCD Size
607 7"
608 8"
610 10.4"
611 10.1"
612 12.1"
615 15"

Operation
S Standard Mode
K Front Key + USB
U Front USB
X Extension Key
F Front Key

Case Color & Material
F Plastic/Silver-Black
B Plastic/Black
U Front Aluminum Case/Silver-Black

Com2
A RS422/485
B RS232/485
C RS232(RTS/CTS)

Sub Model
4 1GB NAND Flash; RTC;
Micro SD Slot; Ethernet
5 4 + Audio Out

Mode
T 4-wires Touch
D 5-wires Touch
H Handheld (Black)
J Handheld (Orange)

Touch & PCB Coating
3 Enhance PCB Coating
5 5V Codec Touch I.C.
6 12V Codec Touch I.C.

Com3 Spec. & Temp.
R Plastic: Com3 RS232 (-10°C ~ 60°C)
Alum.: Com3 RS232 (-20°C ~ 60°C)
Q Plastic: Com3 RS485 (-10°C ~ 60°C)
Alum.: Com3 RS485 (-20°C ~ 60°C)
H Alum.: Com3 RS232 (-25°C ~ 70°C)
G Alum.: Com3 RS485 (-25°C ~ 70°C)

BKRAM & Memory
4 1MB BK Ram

OEM Code
C00 Standard
C01-CFF For brand label customer

PANEL EXPRESS

Software

Supplier Code

Type of License
A Win CE Activated
B Windows USB Dongle
C Windows Online Activated
F Windows Float Online Activated

I/O Tags
03 300
15 1500
30 3000
50 5000
99 9900 (Max.)

Link Number
016 16-links
032 32-links
048 48-links
064 64-links
...
248 248-links (Max.)

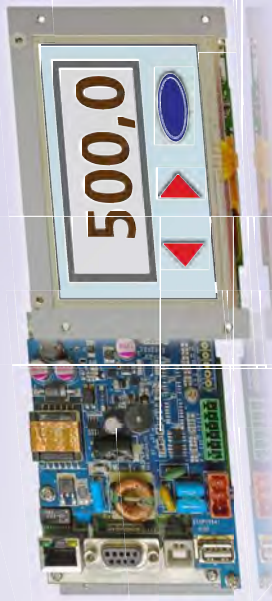
OEM Code

Optional Features
D Database
R Report
V Visualization
C OPC Client
S OPC Server

P2W - SPT - A 03 - 016 35 DRVBCS

PT043-WST for N1R1 Series

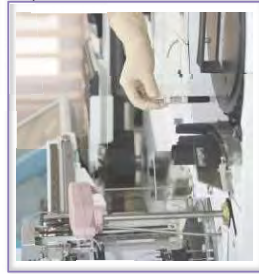
Openframe HMI Panels



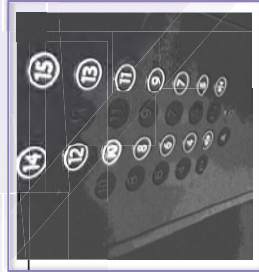
BACK

FRONT

Application Industry



Lab Equipments



Elevator Buttons System



Power Management System

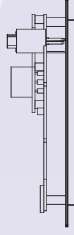
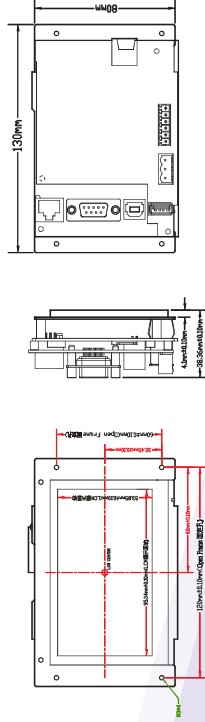
Installation: Can be installed from both side



Fasten screws from front side



Fasten screws from back side



*Please download documents from our website for more detail information.

Model Name	PT043-WST _ _N1R1
Sub-Models	1 / 4
Size	4.3"
Max. Resolution	480*272
Type	TFT LCD with LED Backlight
Max. Colors	16-bit
Backlight Life	20000hrs
Display Contrast	500:1
Luminance	400 cd/m2
Touch Panel	4-wire Analog Resistive Type
CPU	RISC ARM9 32Bit
Backup SRAM	128KB (optional:1MB)
Working Memory	32MB
NADA Flash ROM	Sub-Model 1: 8MB Sub-Model 4: 8MB+128MB(NAND Flash)
Real-Time Clock (RTC)	YES
Micro SD Slot	Sub-Model 4: YES
USB Client	YES (USB 2.0)
USB Host	YES (USB 1.1)
COM1 / COM3	COM1: RS232/422/485, COM3: RS232 (optional:RS485)
COM2	A-RS422/485 B-RS232/485
COM4	N/A
Ethernet	Sub-Model 4: YES
Front Function Keys	N/A
Audio Out (optional)	N/A
Video In (optional)	N/A
Front USB Host Port	N/A
Input Voltage	24VDC±10% Isolated
Consumption	10W
Operating Temperature	-10°C~60°C
Relative Humidity	10%~90%
Shock (operation)	10 ~ 55Hz(X,Y,Z direction, 1G, 30 Mins shock testing)
Certification	N/A
Cooling	Natural Cooling
LCD View Area	95.04 x 53.85 mm
Net Weight	0.2 kg

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Please verify specifications before quoting. This guide is intended for reference purposes only. All product specifications are subject to change without notice.

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PT070-WST for N1R1 Series

Openframe HMI Panels



BACK

FRONT

►► Application Industry



Textiles Mills Machinery

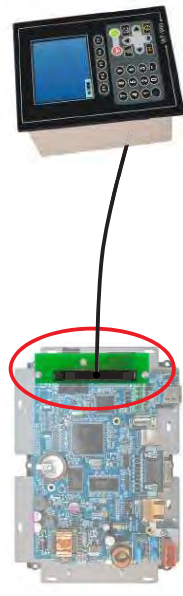


Laser Process Machinery



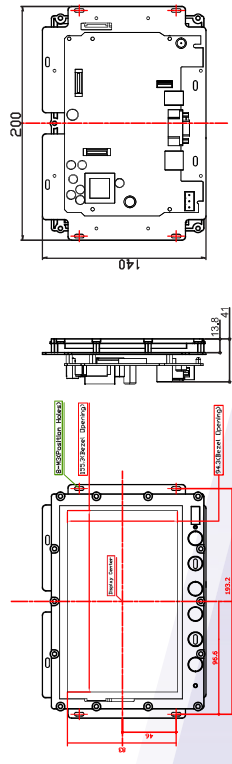
Food and Beverage Industry

►► Extension Module : Can connect with keyboard or other devices



Install with extension keyboard connector

- ◆ Extension for 48 keys & 8 function keys at most
- ◆ Extension for 7 LEDs at most



*Please download documents from our website for more detail information.

Model Name		PT070-WST _-N1R1
Sub-Models		2 / 4
Size		7"
Max. Resolution		800*480
Display	Type	TFT LCD with LED Backlight
	Max. Colors	16-bit
	Backlight Life	20000hrs
Display Contrast		500:1
Luminance		300 cd/m2
Touch Panel		4-wire Analog Resistive Type
CPU		RISC ARM9 32Bit
Backup SRAM		128KB (optional:1MB)
Working Memory		64MB
NADA Flash ROM		8MB+128MB(NAND Flash)
Real-Time Clock (RTC)		YES
Communication Interface	Micro SD Slot	YES
	USB Client	YES (USB 2.0)
	USB Host	YES (USB 1.1)
	COM1 / COM3	COM1: RS232/422/485, COM3: RS232 (optional:RS485)
	COM2	A-RS422/485 B-RS232/485
COM4		N/A
Ethernet		Sub-Model 4: YES
Front Function Keys		N/A
Audio Out (optional)		N/A
Video In (optional)		N/A
Front USB Host Port		N/A
Power	Input Voltage	24VDC±10% Isolated
	Consumption	20W
Environment	Operating Temperature	-10°C~60°C
	Relative Humidity	10%~90%
	Shock (operation)	10 ~ 55Hz(X, Y, Z direction, 1G, 30 Mins shock testing)
Certification		N/A
Cooling		Natural Cooling
Cutout Dimension		188.7 x 133.8 mm
Net Weight		0.6 kg



box

Industrial Data Gateway

SX32



- | | |
|---|--|
|  | <ul style="list-style-type: none"> • Remote monitoring • Remote VNC on mobile devices |
|  | <ul style="list-style-type: none"> • Support user program control • More than 100 protocols • Support various communication drivers |
|  | <ul style="list-style-type: none"> • Provide FTP server options |
|  | <ul style="list-style-type: none"> • Provide dynamic and static schedule function |
|  | <ul style="list-style-type: none"> • PLC transparent connection from S-BOX to R-BOX |
|  | <ul style="list-style-type: none"> • Collecting data • Intelligence analysis |
|  | <ul style="list-style-type: none"> • Sending alarms • E-mail • Sampling record function |
|  | <ul style="list-style-type: none"> • Watchdog function |
|  | <ul style="list-style-type: none"> • 12V/5V isolated power supply • Isolated and protected Serial and Ethernet |
|  | <ul style="list-style-type: none"> • Remote Control and Download |
|  | <ul style="list-style-type: none"> • Built-in power supply with backup power • The alloy output for |

Specification

CPU & Memory	
• CPU	RISC ARM9 32Bit
• Working Memory	64MB
• Build-In Storage Memory	8MB
• Battery Backup SRAM	128KB
• RTC	YES
Communications Ports	
• Serial Com Ports	COM1: RS232(4/22/485 DB9 Female, Pin 12/34/5/6/9) COM2: RS232/485 (3+Pin Terminal, adjust by DIP-Switch) COM3: RS485 (DB9 Female, Pin 5/7/8) RS232 (3+Pin Terminal)
• USB Host	USB 1.1
• USB Client	USB 2.0
• Ethernet	YES(IEEE 802.3, IEEE 802.3u)
• SD Slot	N/A
Software	
• OS Support	RTOS (Real-time O.S.)
• Software Version	PM Designer v2.1, 7.00 or higher
• Reboot Trigger	Watchdog Timer

Power Supply	
• Input Voltage	12-30 VDC (External)
• Power Consumption	5W
• Connector	6Pin-Terminal Blocks
• Isolation	YES
• Relay Output Current	1A@24 VDC
• Carry Capacity	
Environment	
• Operating Temperature	-20°C~70°C
• Storage Temperature	-25°C~75°C
• Humidity	10%~90%
• Shock(operation)	10 ~ 55Hz(X,Y,Z direction, 1G, 30 minutes shock test)
Others	
• LED Indicators	PWR1/PWR2/COM1/COM2/COM3/ RUN/STATUS1/STATUS2
• Enclosure	Metal
• Dimensions(WxHxD)	29 x 150.4 x 98.6 mm
• Weight	0.4 Kg
• Mounting	DIN-Rail Mounting/Panel Mounting
• Certifications	CE / FCC

